PUBLIC NOTICE

PERMIT APPLICATION: **NRS 05.426**

APPLICANT: Gaye Lynn Schaffart, President
Midwestern Gas Transmission Co.
P.O. Box 542500
Omaha, NE 68154-8500
Information: J.H. Rumpp, TRC Environmental 978-656-3533

LOCATION: Multiple Stream Crossings, Midwestern Gas Transmission Company 30.9 mile Eastern Extension Project, Portland Compressor Station to Hartsville, TN
Sumner and Trousdale Counties

WATERSHED DESCRIPTION: The proposed gas line extension will cross numerous streams within the Cumberland River (Old Hickory Lake) watershed. The streams vary in size, flow and composition throughout the proposed alignment and have been assessed to determine the best management practices for crossings. Twenty-seven of the fifty-two stream crossings are considered "hard-bottom" meaning that solid rock lies either at or immediately below the bed surface. Based upon geotechnical studies of the crossings in these streams, the applicant does not anticipate the use of explosives to install these crossings. All construction would be conducted in the dry and any dewatering would be filtered of sediments through filter bags prior to being released into the original channel. Temporary materials used for crossing either streams or wetlands would be removed upon completion and the banks restored and seeded. As proposed, there would be no permanent impacts to streams.

The proposed project involves temporary impacts to 4.715 acres of wetlands at 11 locations along the route. All impacts to wetlands would be temporary.

PROJECT DESCRIPTION: The application proposes to extend the existing natural gas pipeline facility by installation of 30.9 miles of 16-inch natural gas pipeline from the Portland Compressor Station to a new interconnect with the existing pipelines operated by Columbia Gulf Transmission Company and East Tennessee Natural Gas near Hartsville, TN in Trousdale County. The project would be installed within a 75-foot right of way with additional temporary workspace staging areas approximately 25 ft. X 100 ft. at each water feature crossing for equipment and assembly. The impacts to streams are delineated by mile post (MP) numbered from north to south and include stream or wetland crossings at: MP0.31 Wetlands 0.36 ac., MP0.92 Wetlands 0.04 ac., MP1.00 Wetlands 0.67 ac., MP1.18 Wetlands 1.73 ac., MP1.40 Wetlands 0.35 ac., MP1.59 Wetlands 1.17 ac., MP1.84 Wetlands 0.31 ac., MP2.53 tributary to Grace Creek, MP3.11 Grace Creek, MP4.80 Donahoe Branch, MP6.10 trib. to West Fork Drakes Creek, MP6.33 trib. to West Fork Drakes Creek, MP6.82 West Fork Drakes Creek, MP7.40 West Fork Drakes Creek, MP7.80 trib to West Fork Drakes Creek, MP 8.01 trib to West Fork Drakes Creek, MP8.15 West Fork Drakes Creek, MP8.69 trib to Dry Fork, MP9.07 trib to Dry Fork, MP9.50 trib to Dry Fork, MP9.75 Int. trib to Dry Fork, MP10.70 trib to Dry Fork, MP11.04 Whitson Branch, MP11.32 Whitson Branch, MP11.35 trib to Whitson Branch, MP11.66 trib to Whitson Branch, MP11.74 trib to Whitson Branch, MP11.95 Whitson Branch, MP12.16 trib to Whitson Branch, MP12.55 Unnamed Stream, MP12.70 Unnamed intermittent stream, MP13.90 Wetlands 0.01 ac., MP15.15 Pryor Branch, MP17.05 Dry Fork, MP17.44 trib to Dry Fork, MP17.85 trib to Dry Fork, MP18.03 trib to Dry Fork, MP18.30 trib to Dry Fork, MP18.75 trib to Dry Fork, MP19.17 trib to Dry Fork, MP19.32 Wetlands 0.007 ac., MP20.20 trib to Bledsoe Creek, MP20.43 Bledsoe Creek, MP21.75 trib to East Fork, MP22.15 trib to East Fork, MP22.29 Wetlands 0.06 ac., MP22.35 trib to East Fork, MP22.80 East Fork, MP23.05 trib to East Fork, MP23.40 trib to East Fork, MP24.00 trib to East Fork, MP24.33 trib to East Fork, MP24.60 trib to East Fork, MP25.24 trib to East Fork, MP25.36 trib to Rocky Creek, MP25.70 Rocky Creek, MP26.60 Unnamed intermittent stream, MP27.34 trib to Second Creek, MP27.78 Second Creek, MP28.05 Second Creek, MP28.45 Second Creek, MP28.75 Second Creek and Wetlands 0.008 ac. Additional information and maps may be viewed online at: http://www.tennessee.gov/environment/wpc/ppo/arap/.

In accordance with the Tennessee Antidegradation Statement (Rule 1200-4-3-.06), the division has determined that the proposed activity will not result in degradation to water quality.

USGS TOPOGRAPHIC QUADRANGLE: Portland, TN (309-SE), Fountain Head, TN (312-SW), Turners Station, TN (312-SE), Bethpage, TN (313-NE), Hartsville, TN (317-NW)

PERMIT COORDINATOR: Brian Canada

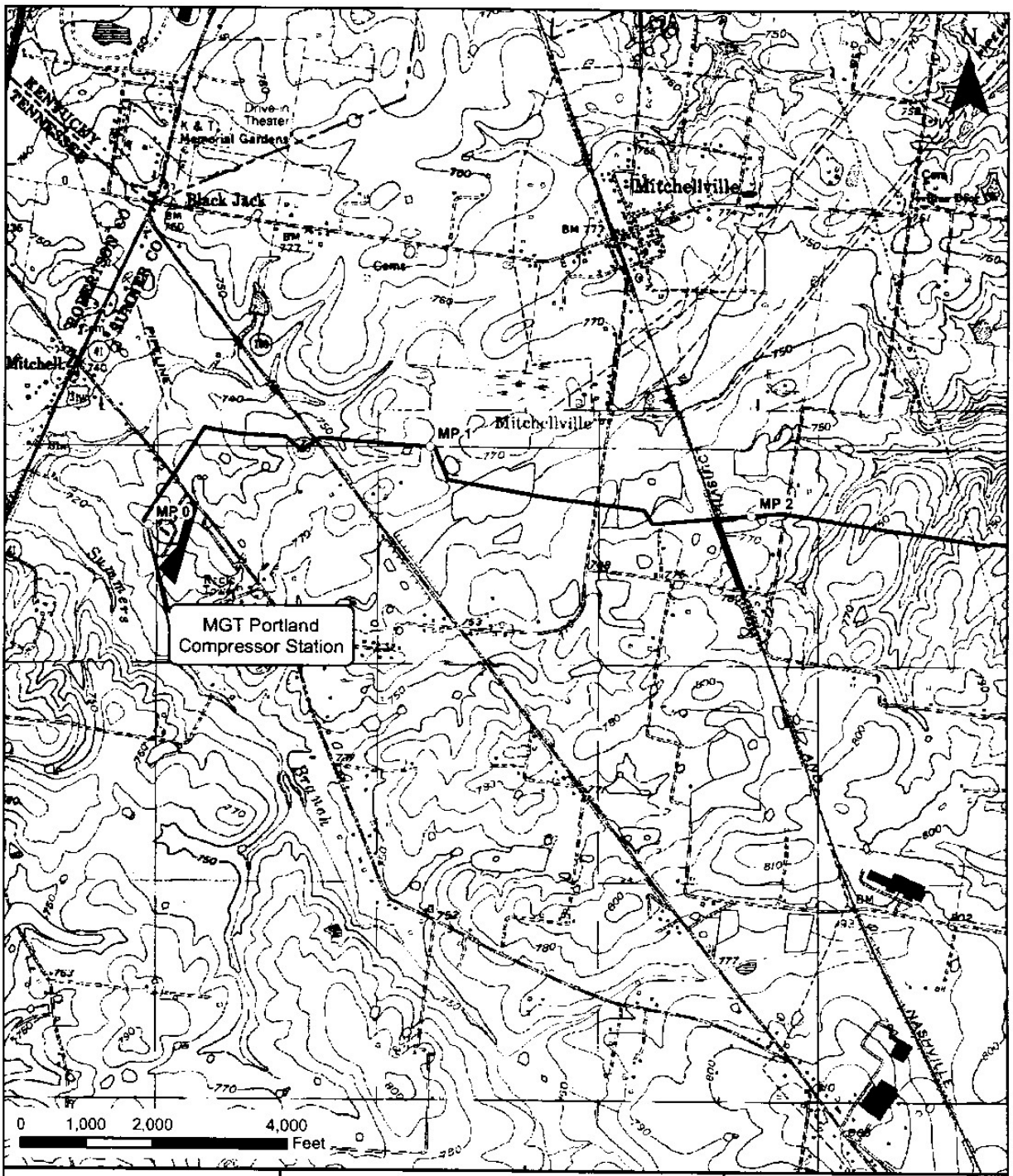
No decision has been made whether to issue or deny this permit. The purpose of this notice is to inform interested parties of this permit application and to ask for comments and information necessary to determine possible impacts to water quality. Persons wishing to comment on the proposal are invited to submit written comments to the department. Written comments must be received within **thirty days of the date that this notice is posted**. Comments will become part of the record and will be considered in the final decision. The applicant's name and permit number should be referenced.

Interested persons may also request in writing that the department hold a public hearing on this application. The request must be filed within the comment period, indicate the interest of the person requesting it, the reasons that the hearing is warranted, and the water quality issues being raised. When there is sufficient public interest in water quality issues, the department will hold a public hearing.

The permit application, supporting documentation including detailed plans and maps, and related comments are available at the department's address for review and/or copying. The department's address is:

Tennessee Department of Environment & Conservation
Division of Water Pollution Control, Natural Resources Section
7th Floor L & C Annex
401 Church Street
Nashville, TN 37243

In deciding whether to issue or deny a permit, the department will consider all comments on record and the requirements of applicable federal and state laws.



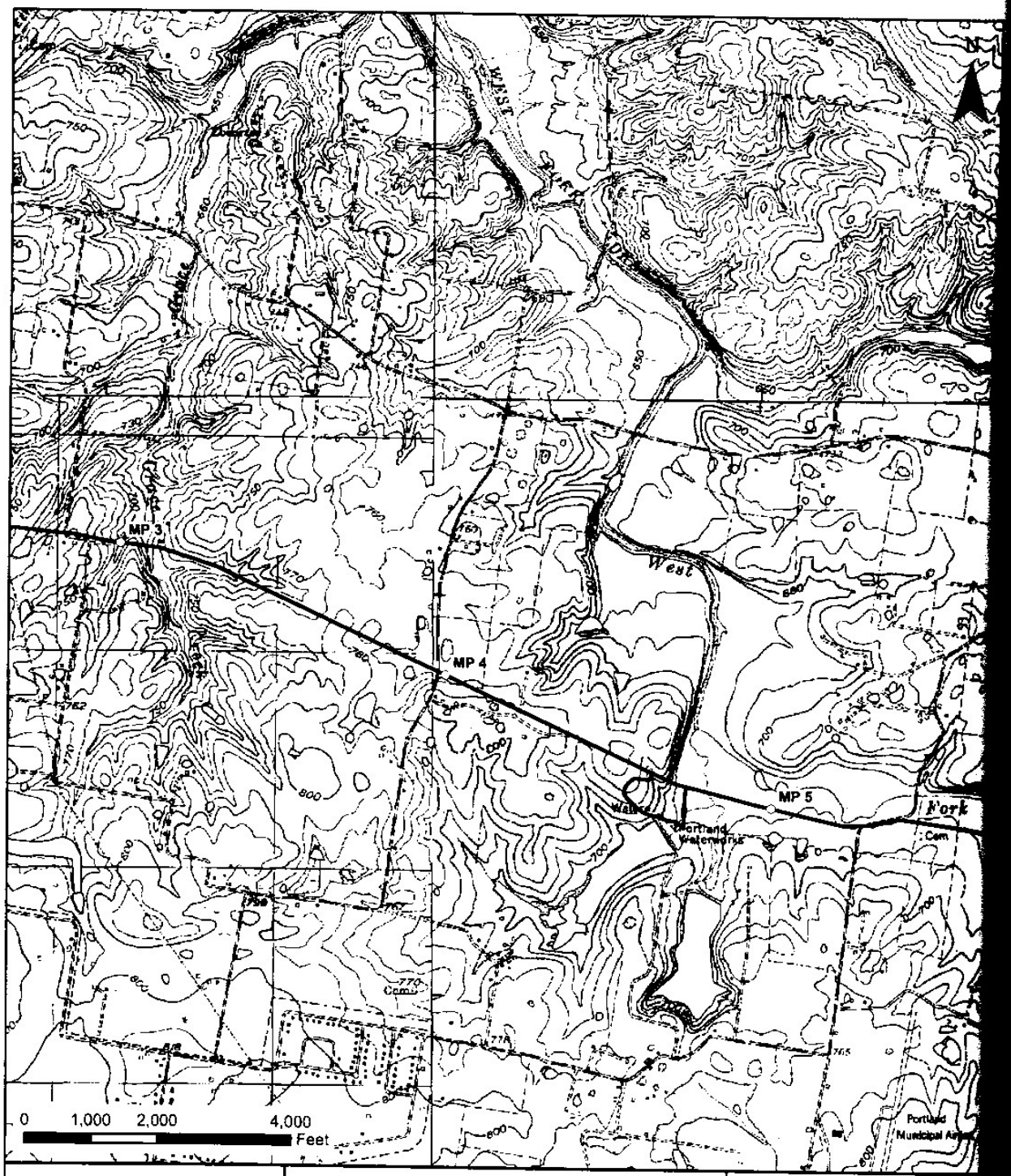
Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 1 of 9

Sumner County, TN

- Mileposts
- Proposed Route
- Access Roads
- Contractor Yard
- NWI Wetlands



Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 2 of 9

Sumner County, TN

- Mileposts
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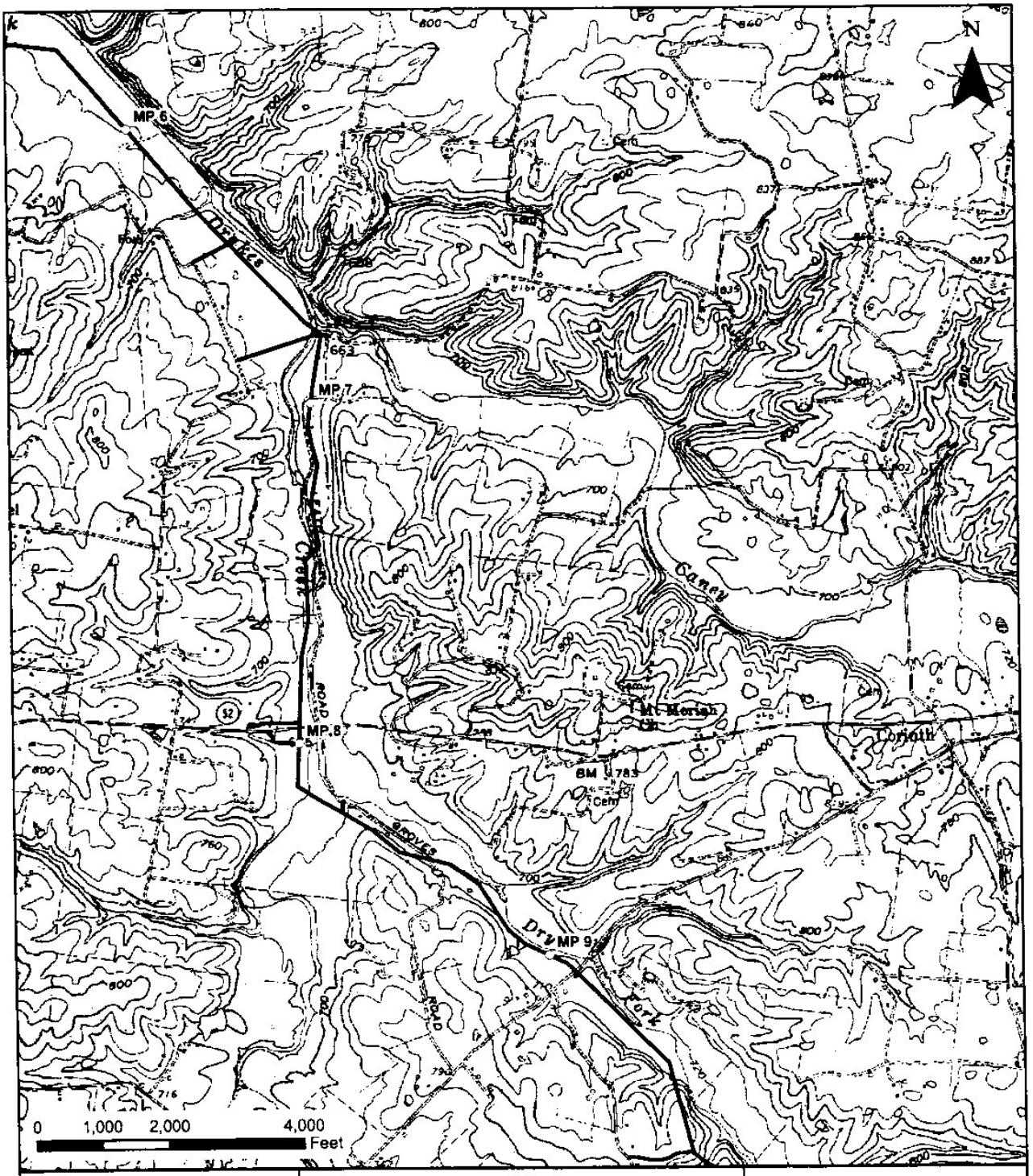
- Access Roads
- NWI Wetlands



Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 3 of 9

Sumner County, TN

- Mileposts
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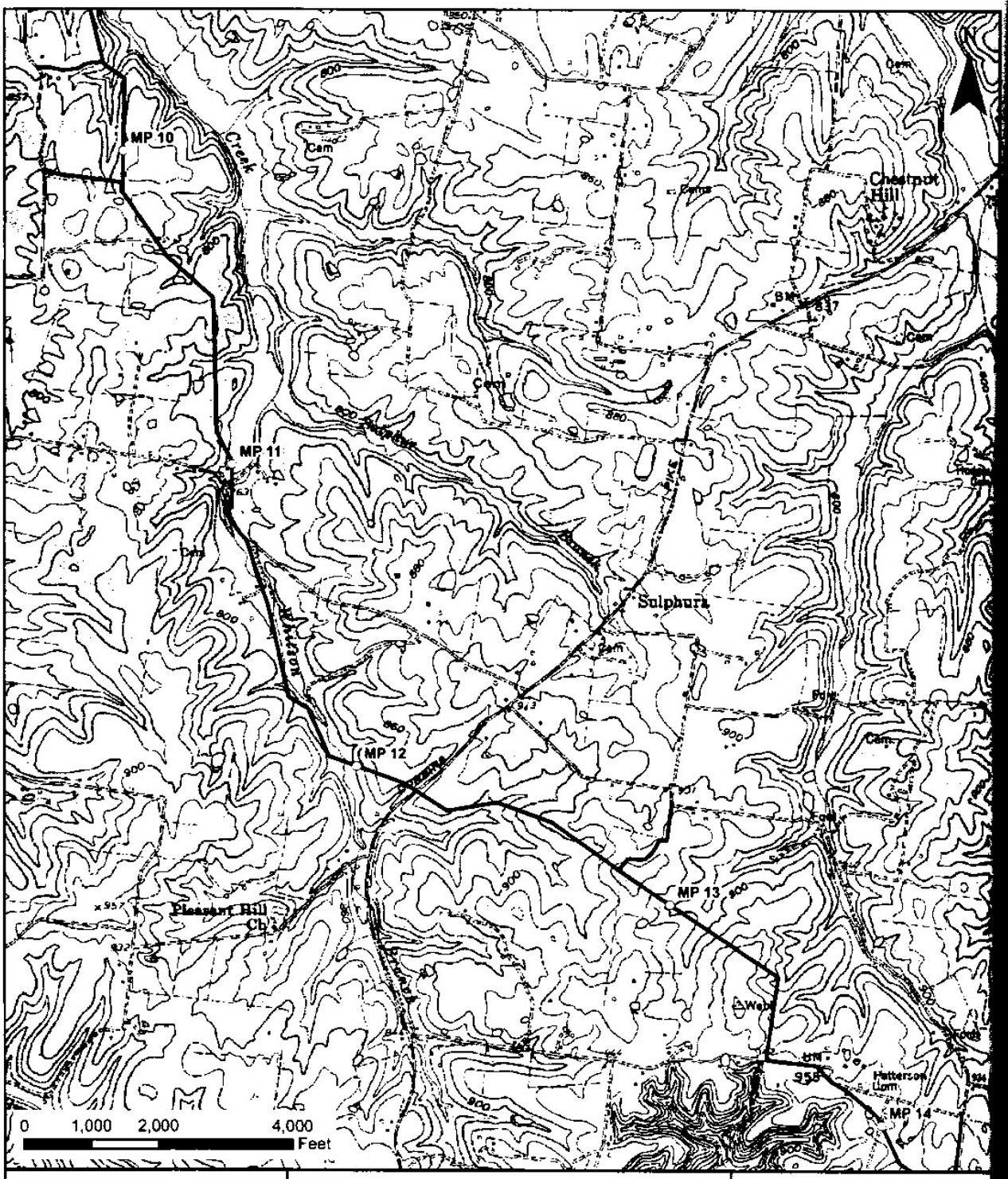

Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 4 of 9

Sumner County, TN

- Mileposts
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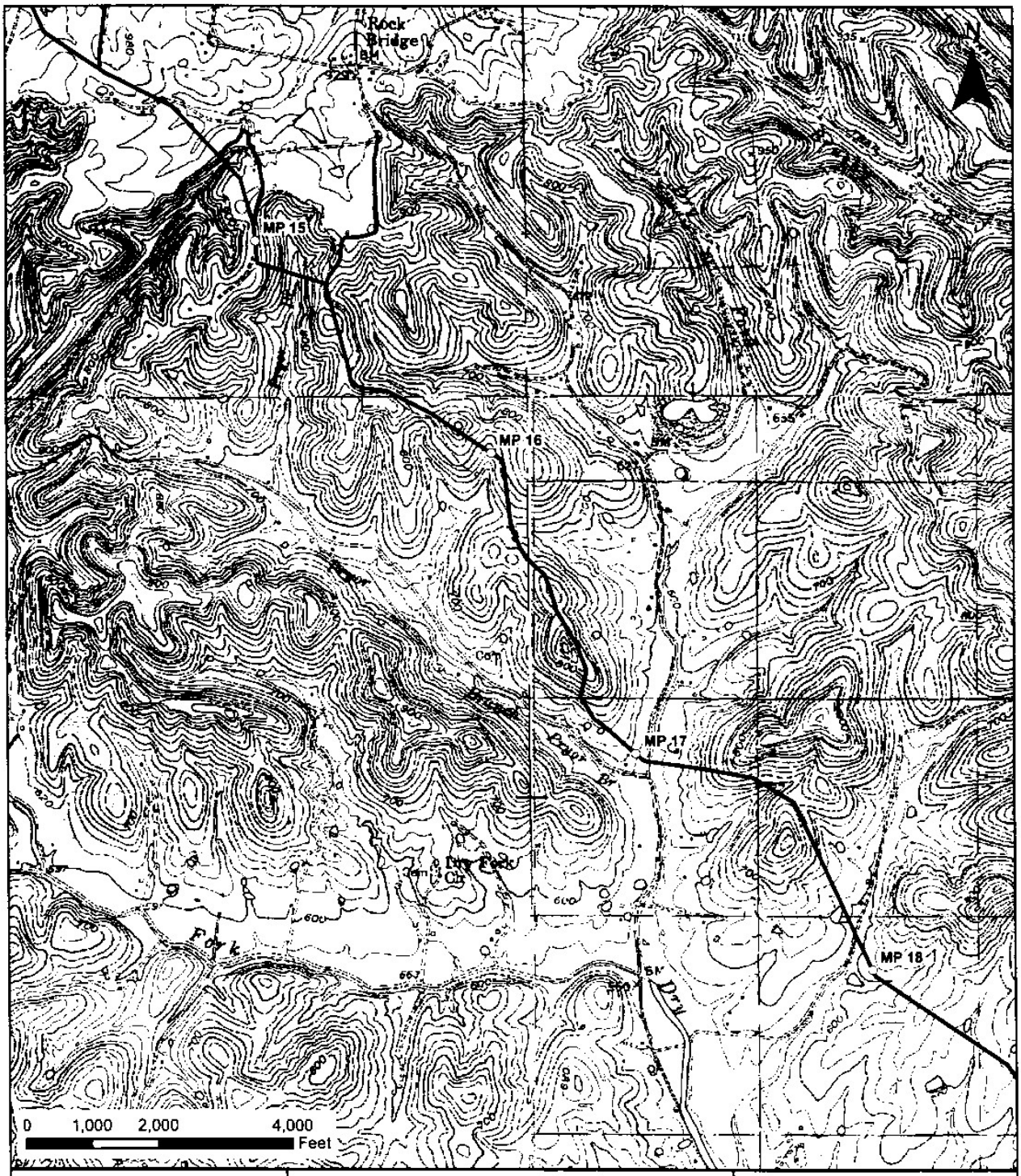
- NWI Wetlands



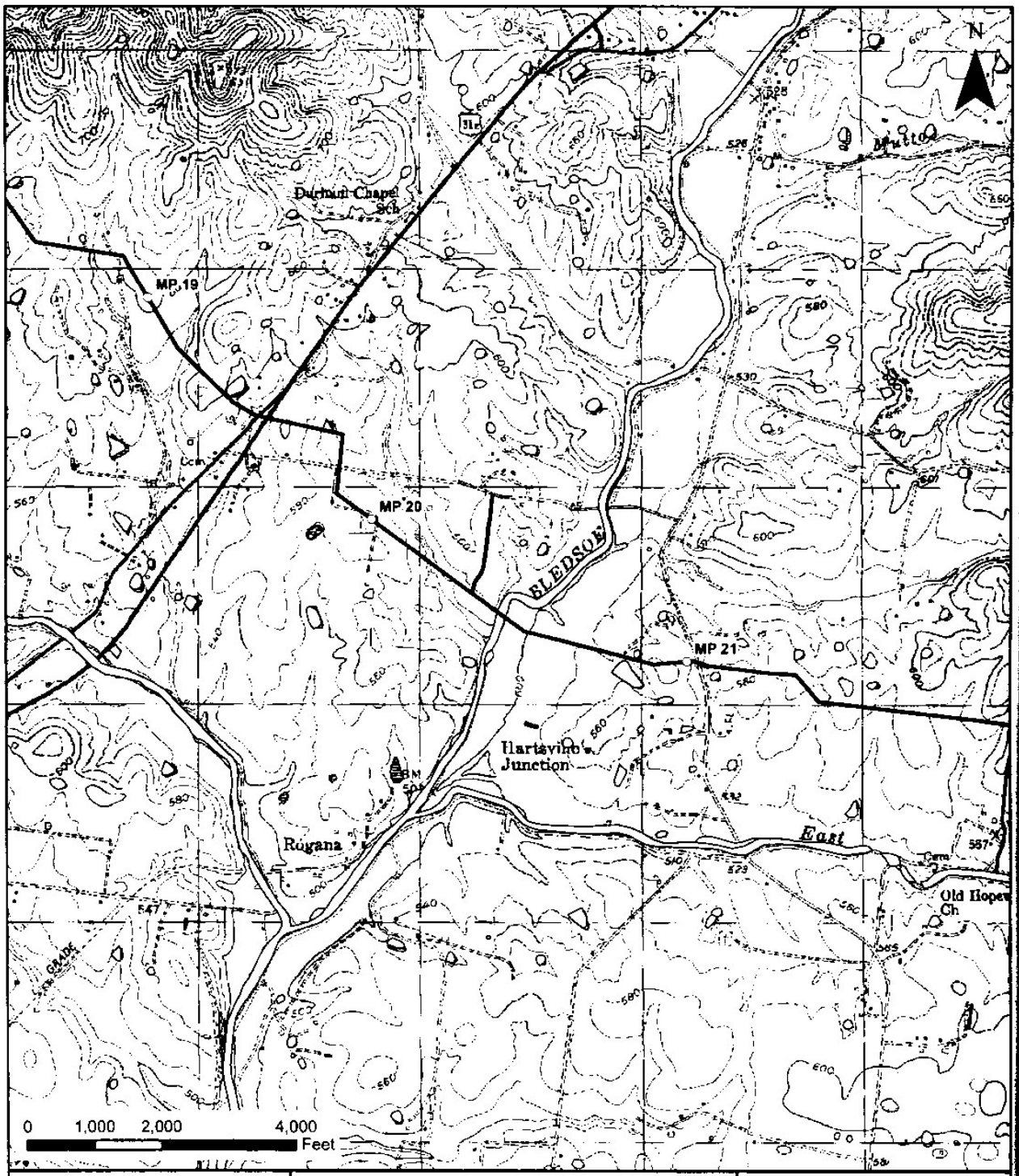
Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 5 of 9

Sumner County, TN

Mileposts
Proposed Route
Access Roads
NWI Wetlands



Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 6 of 9

Sumner County, TN

- Mileposts
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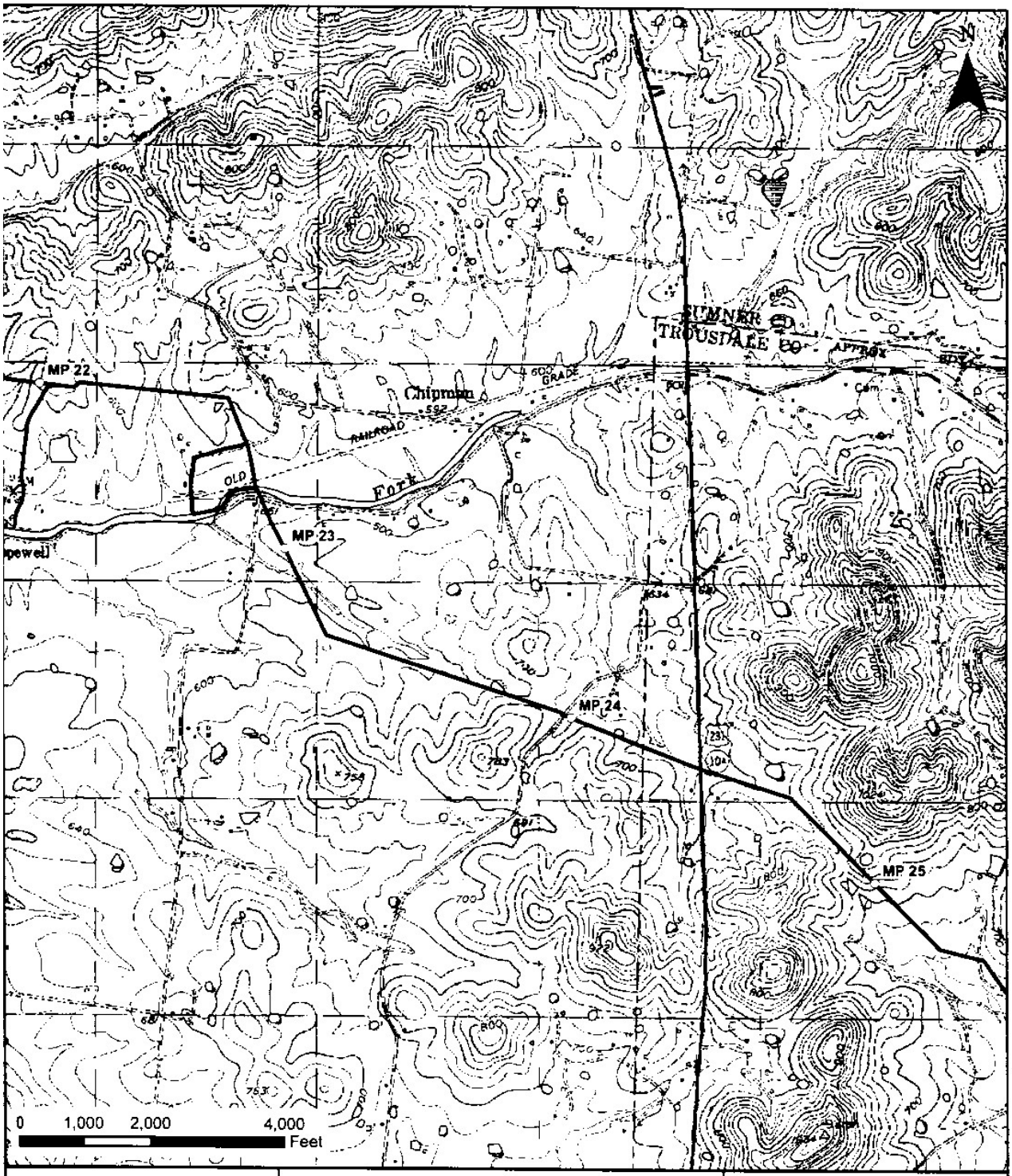
- Access Roads
- NWI Wetlands



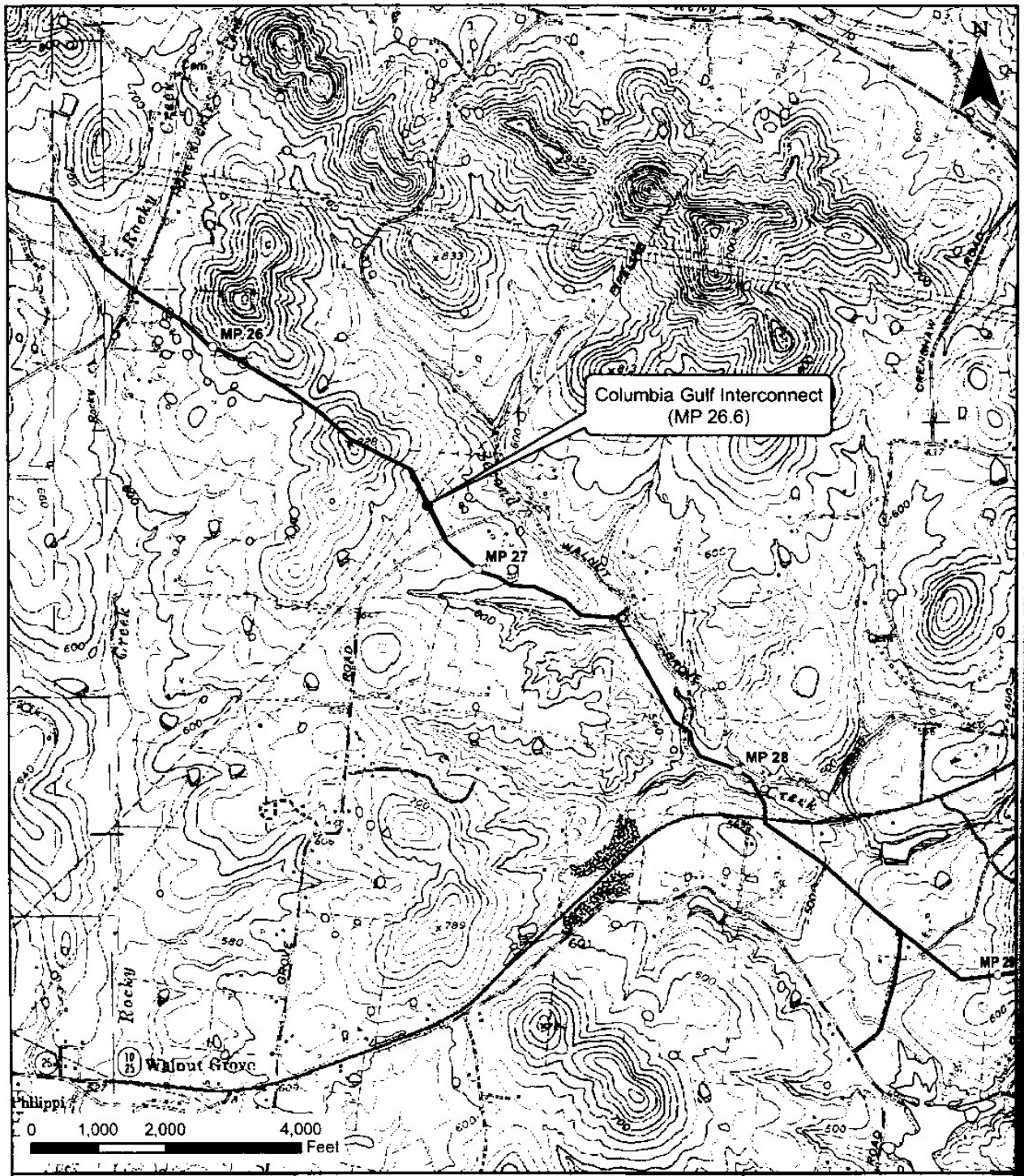
Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 7 of 9

Sumner and Trousdale Counties, TN

- Mileposts
- Proposed Route
- Access Roads
- NWI Wetlands



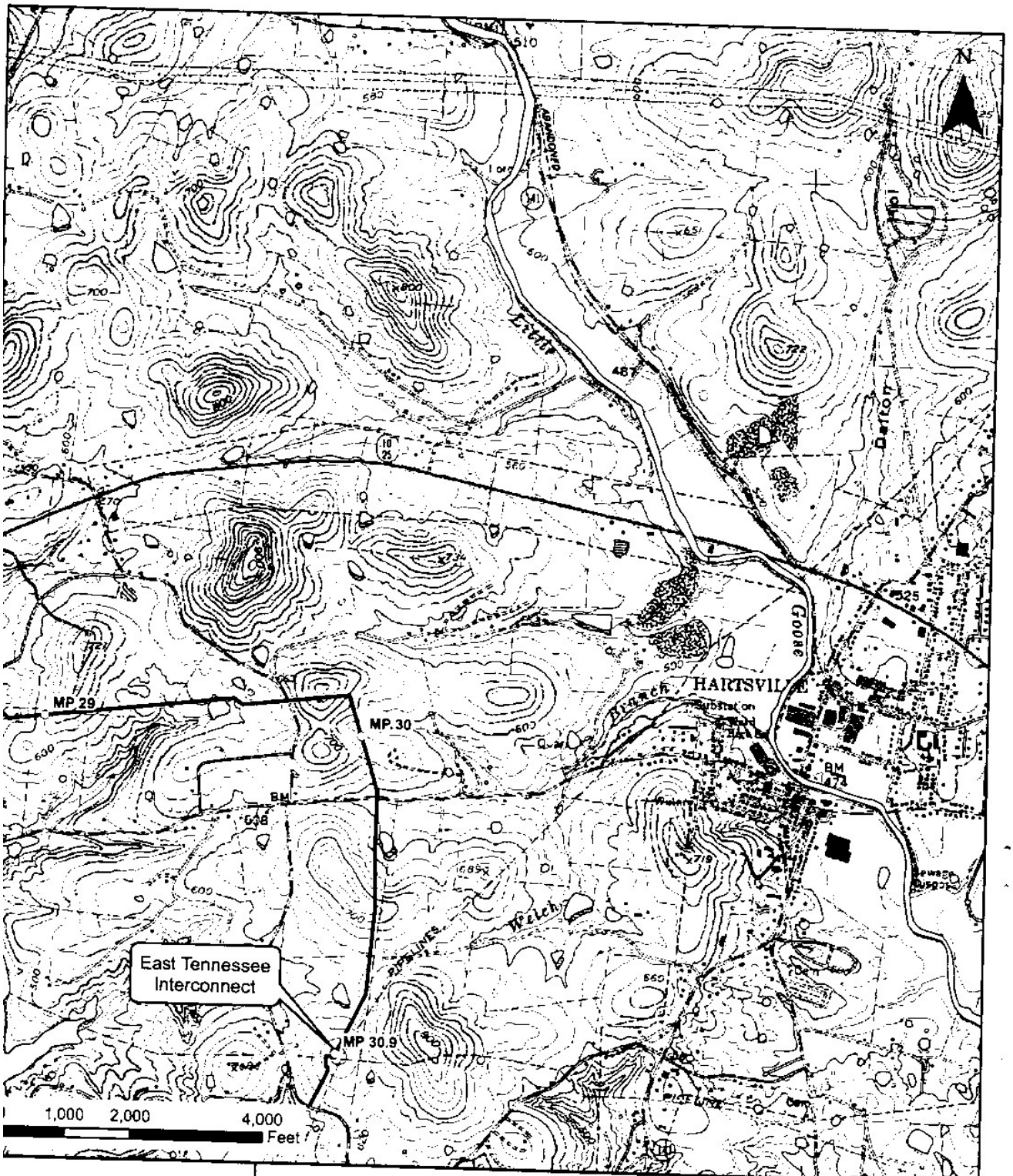
Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 8 of 9

Trousdale County, TN

- Mileposts
- Proposed Route
- Access Roads
- NWI Wetlands



Midwestern Gas Transmission Company

MGT Eastern Extension Project

Sheet 9 of 9

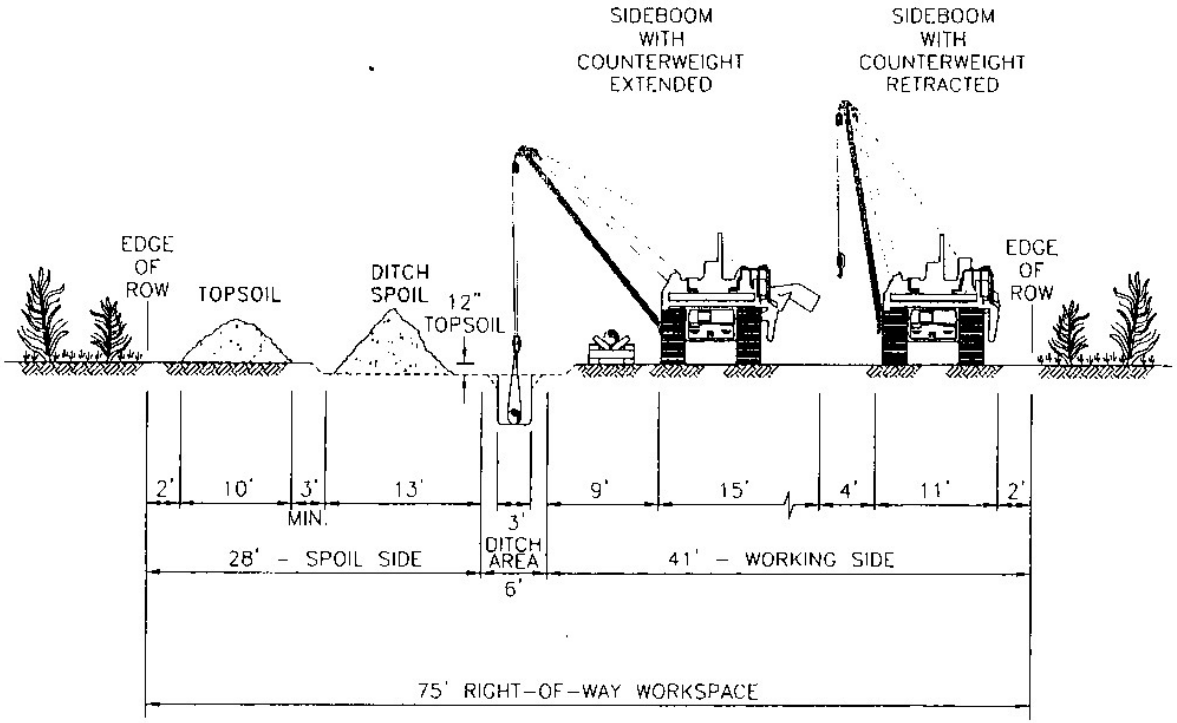
Trousdale County, TN

Mileposts

Proposed Route

Access Roads

NWI Wetlands



Midwestern Gas
Transmission Company

MGT EASTERN EXTENSION PROJECT

TYPICAL CROSS SECTION OF
CONSTRUCTION ROW WIDTH
16" PIPE DIAMETER

Sumner and Trousdale Counties, Tennessee

Geology and Karst along Proposed Pipeline Route

According to the Karst Hazard Map (Crawford and Veni, 1989), the proposed pipeline is in the lowest risk area where less than 1% of sinkholes are present (Figure 2). From available topographic and geologic maps, other published reports, records of caves in the area, an aerial reconnaissance by helicopter, and a limited ground surface survey (due to lack of access to some private properties) PELA was able to further refine the general characterization of the degree of karstification of the terrane the proposed pipeline would cross, as well as the potential for impacts to the karst itself and the local groundwater and springs.

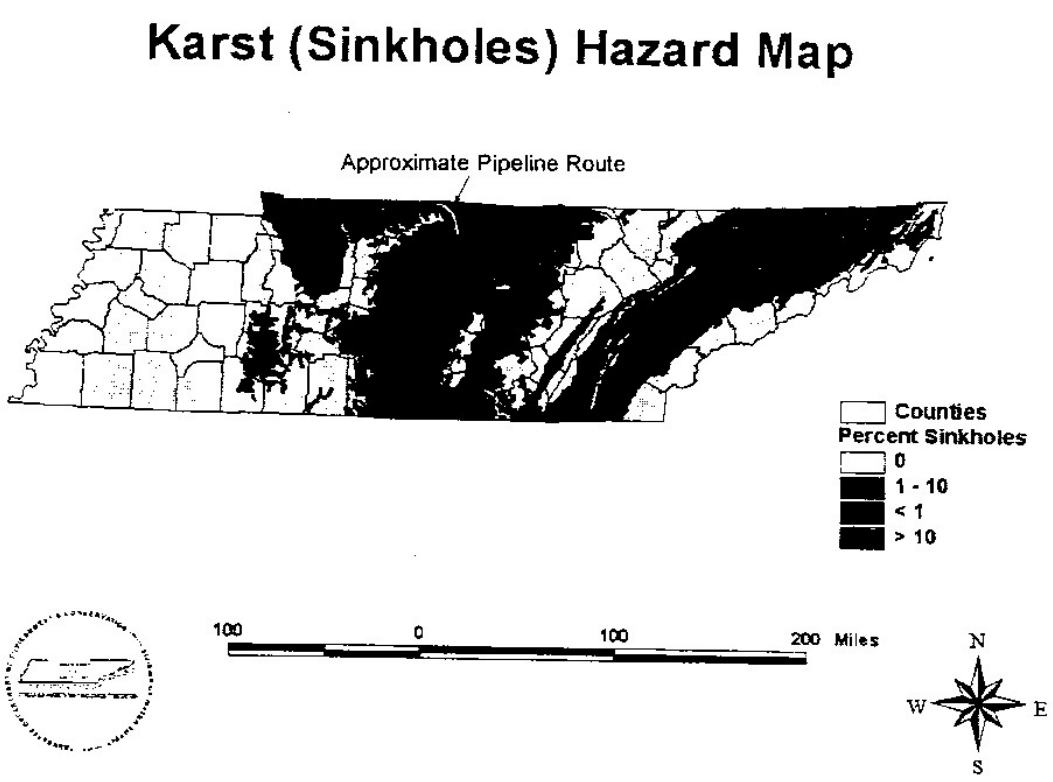


Figure 2 – Karst Hazard Map of Tennessee from TDEC Division of Water 2002, based on Crawford and Veni 1989.

To simplify the descriptions PELA will use the Mile Post (MP) system currently being used by Midwestern Gas Transmission (MGT) for the proposed pipeline; a brief summary of the potential for karst and groundwater impacts is presented in Table 1.

Distance (miles)	Potential for Karst and Groundwater Impacts
0 to 4.6	Moderate
4.6 to 13.5	Low
13.5 to 18	Moderate
18 to 30.9	Low

Table 1: Potential for Karst and Groundwater Impacts

MP 0 to MP 4.6

This area is underlain by Mississippian St. Louis limestone (Msl). Only the lower 50 feet of the St. Louis occurs at MP 0 and thins eastward to approximately 10 feet thick at MP 4.65. Below the St. Louis is the Mississippian Warsaw limestone (Mw). The St. Louis can be very karstic; forming large sinkhole plains (areas with very high sinkhole densities) as can be seen to the west and north of the pipeline route on the topographic maps. However along this section of the proposed pipeline route the only sinkholes observed are formed in a narrow north-south trending corridor located between approximately MP 3.75 and MP 4.0. The proposed route of the pipeline passes directly through only one of these sinkholes. PELA recommends that no section of the pipeline directly cross any existing sinkholes. MGT has indicated that potential route alternatives would be evaluated at this location when access to the property becomes available and PELA will help determine the appropriate setback from this sinkhole. During PELA's site visits only one additional feature was noted in the area. This was a small spring located in a small valley just north of the pipeline at approximately MP 4.3.This section of the route is predominantly agricultural so smaller collapse features would probably be quickly filled. Also it is expected that the soils in this section of the pipeline are thick enough that no blasting would be required. The proposed pipeline would cross only small, generally intermittent streams in this area. Although the limestones present form well-developed karst elsewhere, the karst features observed (sinkholes, springs, collapse feature etc.) in this area would warrant only a moderate rating for potential karst related problems and groundwater vulnerability. No major springs, or caves and only a few sinkholes were noted in the pipeline vicinity.

MP 4.6 to MP 8

At MP 4.6 the proposed pipeline would drop steeply into the valley of the West Fork Drakes Creek. The bedrock here is Mississippian Ft. Payne Formation (Mfp) in the valley bottom with Warsaw limestone in the upland areas in the first part of the section, grading to Ft. Payne uplands in the latter section area. The only additional surface feature located was a small collapse pit located ½ mile north of the proposed pipeline at approximately MP 5.5. The route of the proposed pipeline here is located on the flood plain of the creek. All springs and sinkholes noted were located on upland surfaces or at the edges of the flood plain. Since water moves from higher areas toward the creek, the location of the pipeline on the flood plain would create little chance for groundwater contamination. The West Fork Drakes Creek appears to be a perennial stream (flows year round). Due to the position of the pipeline in the flood plain this section of the proposed pipeline is a low risk for potential karst and groundwater problems.

MP 8 to MP 9.3

At approximately MP 8 the pipeline is routed along a main tributary to the West Fork Drakes Creek, which is named Dry Fork Creek. This name would imply that the stream, or portions of it, are dry during certain times of the year, usually the late summer and early fall. If this is true, construction activities should implement and follow BMP's and Spill Containment, Control, and Countermeasure Plans even when working in and around the dry stream beds. During these times of the year water flow is reduced and is usually confined to small karst conduits either under or along side the stream bed. These conduits may eventually emerge as springs somewhere down stream. Due to the position of the pipeline in the flood plain this section of the proposed pipeline warrants a low rating for karst and groundwater problems.

MP 9.3 to MP 11

The proposed pipeline route crosses a section of Mfp upland. All sinkholes noted are located upgradient of the proposed pipeline route and no wells are in the immediate vicinity of the pipeline. This section of the proposed pipeline is rated a low sensitivity for karst and groundwater problems.

MP 11 to MP 12

Here the proposed pipeline would be located in the flood plain of Whitson Branch, a tributary to Dry Fork Creek. As with Dry Fork Creek, the stream, or portions of it, is probably intermittent. Precautions and risks are the same as those described for Dry Fork Creek. No karst features were noted in this area. This section of the proposed pipeline warrants a low rating for karst and groundwater problems.

MP 12 to MP 13.5
The proposed pipeline route crosses a section of Mfp upland. No karst features were noted in the area. Two wells are located in the vicinity of the pipeline. This section of the proposed pipeline has a low sensitivity to karst and groundwater problems.

MP13.5 to MP 18
The proposed pipeline route traverses the Highland Rim escarpment. Numerous small springs are located on the slopes and at the base of the escarpment. There are reported to be some collapse pits in this area, but these were not observed by PELA during the investigations due to lack of access. Due to steep slopes and numerous small springs this area warrants a moderate rating for potential problems with karst and groundwater.

MP 18 to MP 27
This segment of the proposed pipeline crosses the Central Basin Province. The predominate bedrock is the Ordovician Leipers and Cathys Formations (Olcy). This portion of the route is over generally open ground with gentle slopes. No sinkholes were noted and the few springs located were generally of low yield. Several large surface streams are present and appear to be perennial. This section of the proposed pipeline has a low sensitivity for potential karst and groundwater problems.

MP 27 to MP 30.9
The route continues across the Central Basin. Bedrock is a mixture of Ordovician carbonates including the Bigby-Cannon Formations (Obc), the Hermitage formation (Oh) and the Carters Limestone (Oc). A few sinkholes were noted, but these are well away from the proposed pipeline route. Several small springs and ponds are located in the vicinity of the proposed pipeline route. This section of the proposed pipeline has a low susceptibility to potential karst and groundwater problems.

PELA's interpretations and conclusions were based on a review of local topographic and geologic maps as well as surface and air reconnaissance. The surface reconnaissance was limited because portions of the pipeline route are located on private property which is not being made accessible to PELA personnel. These properties were reported to contain caves and springs that PELA was unable to evaluate on the ground. PELA did review the entire route by helicopter, and the features and the geologic conditions observed indicate that the reported caves and springs are probably not major.

Water Well and Spring Yield Evaluations:

To evaluate the aquifer characteristics of each of the geologic formations along the proposed pipeline corridor, and therefore the potential for impact to wells, PELA obtained well data from the Tennessee Department of Environment and Conservation (TDEC) Water Quality Division for a four mile wide corridor, two miles on each side of the proposed pipeline. Wells that had no water yield value listed were not used. From the geologic quadrangle maps PELA determined the geologic formation that the well was predominantly located in. Wells in the same geologic formation were grouped together and the distribution of the estimated yields was graphed in 5 gallon per minute (gpm) increments. It should be noted that no geologic quadrangle map is currently available for the Fountain-Head Quadrangle. To determine the geology of wells for this quadrangle PELA had to extrapolate data from adjacent quadrangles guided by the Geologic Map of Tennessee (Hardeman, 1966).

In karst terranes, well yield is related to the characteristics of the geologic formation, the local topography and well installation techniques. In general limestone and dolomite rock in the study area have very low initial (primary) porosity due to the well crystallized structure of the rock. Wells drilled in carbonate rocks without significant fractures tend to be dry wells. Fractures and bedding plane partings produce a secondary porosity. Wells which intercept unmodified fractures and bedding plain partings tend to have low yields, depending on the number of partings intercepted. However, these fractures and bedding planes are enlarged by dissolution when water passes through them. If intersected these dissolution-widened partings may give moderate yields depending on local relief and storage capacity of the aquifer. Concentrated water flow along bedding planes or at other discontinuities in the rock can

Karst BMP's related to Pipeline Construction

General Best Management Practices for Karst: These are general recommendations that apply to all karst areas where construction operations are planned.	**Low Vulnerability Areas:** General best management practices and the additional recommendations under this category apply to low vulnerability karst areas.	**Moderate Vulnerability Areas:** General best management practices, low vulnerability recommendations, and the additional recommendations under this category apply to moderate vulnerability karst areas.
• Whenever possible, locate trench, right-of-way and turn arounds to minimize deep cuts and fills, reducing the potential for soil erosion. • When locating trenches, right-of-way and turn arounds attempt to maintain natural surface drainage patterns as much as possible in order to avoid disrupting natural subsurface flows. • Avoid locating trench, right-of-way, spoil sites and/or equipment turnaround/turnout sites near any surface karst features, cave entrances, or exposed epikarst. • Storage areas for fuel and other hazardous materials should be located away from known karst features and if possible on low vulnerability karst areas. • Known karst features within the right-of-way should be flagged or otherwise identified for field crews. • If previously unidentified karst features are encountered during clearing or construction, activities at that location should be ceased. Erosion control devices straw bales and silt fence are to be placed and TDEC is to be notified within 24 hours of the discovery.	• Implement a sediment and erosion control plan prior to construction such as the installation of silt fencing and/or straw hay bales, berms, rock ditches along the entire edge of any sinkhole and around any potential conduit that surface water/sediment may use to enter the ground water consistent with FERC Plan. • Where necessary, haul debris to alternative locations. Ensure that runoff from surplus piles does not enter any surface karst features or streams leading into any surface or subsurface features. • Avoid drilling or blasting near karst features. If blasting is unavoidable, consider the use of minimum or delayed charges, blasting mats and other mitigating techniques to prevent rock fragments from damaging or landing in surface karst features or cave entrances, or blocking streams flowing into surface karst features or cave entrances.	• Avoid construction activities during periods of heavy rainfall to reduce the potential for soil erosion and sediment transfer to the subsurface. • Avoid sinking streams, intermittent or ephemeral surface channels, and dry valleys. Streams that sink or lose water to the subsurface have the potential to transport sediment and debris into subsurface karst resources. Adequate designs should be incorporated for bridging or culverting these areas if they must be crossed. • Reduce the size of shot as much as possible and stagger detonations, to help minimize vibration and shock. • Where practical, substitute rock drilling/hammering for blasting on well-developed epikarst. Epikarst is the term used to describe the zone of soil – bedrock contact in karst areas. Due to preferential weathering of the bedrock along faults, fractures, and other plains of weakness this contact can be very irregular and the bedrock greatly weakened and highly permeable.

The locations of the features should be marked in the field and plotted on a map. • After completion of subgrade construction or modification, borrow pits, quarries, spoil piles, cut and fill slopes, and other disturbed areas should be restored to preconstruction conditions by installation of permanent erosion control measures, seeding of locally appropriate plants, and mulching in accordance with landowner agreements (avoid backfilling with stumps, clearing debris, or other organic debris).	• Avoid fueling or servicing machinery closer than 100 feet from a stream bank, sinkhole, spring, or cave entrance. • In the event of a fuel spill, contaminated soil should be removed, contaminated bedrock surfaces cleaned with appropriate sorbents, and appropriate reporting requirements followed. • Monitor sediment/erosion control measures after precipitation events. Clean, repair, and replace structures as necessary. • Evaluate the effectiveness of the BMPs, and adjust practices when necessary.	• Maintain natural stream features such as riffles or pools as practicable. • Keep all machinery out of streams as much as possible. • Limit the removal of riparian vegetation to only when it is necessary.

SUMNER COUNTY, TENNESSEE

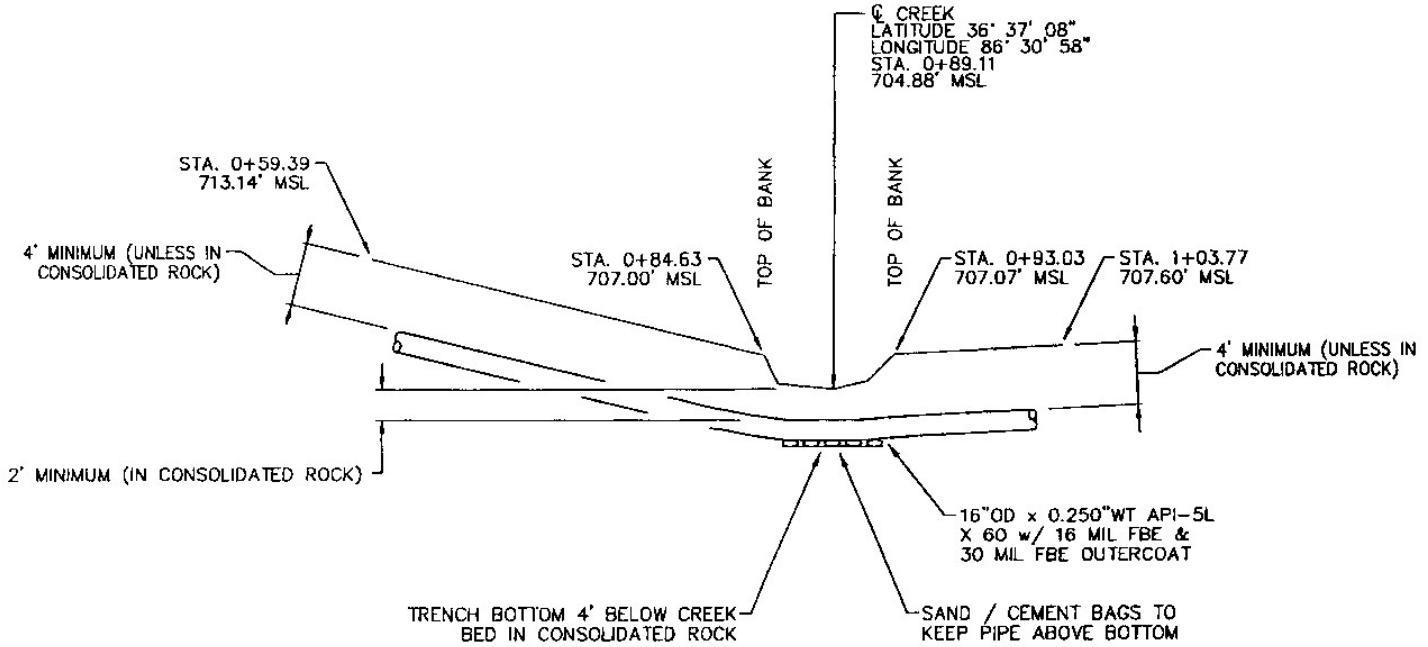


FIGURE 3

PROFILE

Rev	Revised	By	Date	Chkd	Appd
0	ISSUE FOR PERMIT	KW	08/04/06	BD	MS

NOTE:
STATIONING IS SPECIFIC TO PROFILE SURVEY EFFORT ONLY.

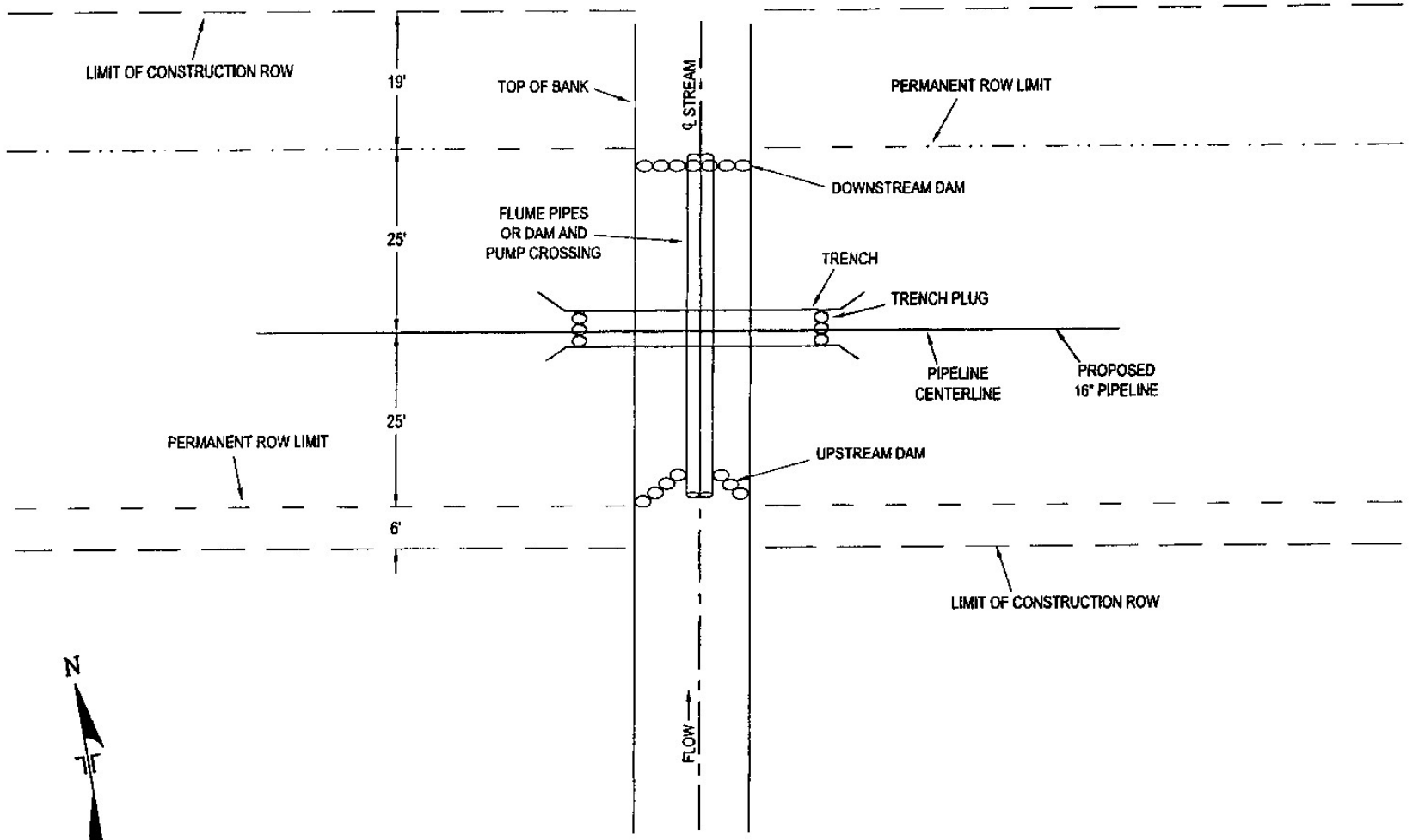
GULF INTERSTATE ENGINEERING
HOUSTON, TEXAS

Dwn. by	KW	Date	08/04/06
Scale	1"=10'	Design No.	WAP0295

MGT EASTERN EXTENSION PROJECT

TRIBUTARY TO GRACE CREEK
WATERBODY CROSSING
@ M.P. 2.95

Drawing	Sheet	Rev.
1204-WA-P-0295		0



Project Mngr:	LW
Drawn By:	MRF
Checked By:	LW
Approved By:	LW
Project No.	18065030
Scale:	AS SHOWN
File No.	GEO18065030-MP2-95
Date:	AUGUST 2006

Terracon
Consulting Engineers and Scientists
5217 Linbar Drive, Suite 309 Nashville, TN 37211
(615) 333-6447 (615) 333-6443

SITE PLAN

MGT / EASTERN EXTENSION PROJECT
TRIBUTARY TO GRACE CREEK
WATER BODY CROSSING
MILEPOST 2.95

FIG. No. 4